

## ABSTRACT

A method for as-needed, pseudo-random, computer-generated environments. The as-needed step allows for that area of the environment actually in use to be instantiated only as needed and only for as long as it remains in use. The as-needed step allows for a potentially infinite environment (as to size and detail) while minimizing the opportunity and resource costs to create and store such an environment. The pseudo-random step allows any degree of creative freedom or control in the presentation (e.g., size, shape, location, orientation, movement, density, transparency, etc.) of the environment and components within any required rule sets. An optional step would combine the concept of “nested fidelity” with the as-needed and pseudo-random steps. The “nested fidelity” step allows for successively greater levels of detail to be given to components only as needed.